

Claims

[c1] A method of contrast matching a first image and a second image comprising:
generating an image ratio of the first image and the second image;
filtering the image ratio to form a filtered ratio; and
multiplying the second image by the filtered ratio to form an adjusted image.

[c2] A method as recited in claim 1 wherein filtering comprises low pass filtering.

[c3] A method as recited in claim 2 wherein low pass filtering comprises boxcar filtering.

[c4] A method as recited in claim 1 wherein forming an image ratio comprises forming an image ratio having a numerator and a denominator and wherein regularizing comprises adding a constant to the denominator.

[c5] A method as recited in claim 1 wherein forming an image ratio comprises forming an image ratio having a numerator and a denominator and wherein regularizing comprises multiplying the numerator by the second image and the denominator by the second image and adding a constant to the denominator.

[c6] A method as recited in claim 1 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is contrast matched to the first image.

[c7] A method as recited in claim 1 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is brightness matched to the first image.

[c8] A method as recited in claim 1 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is contrast and brightness matched to the first image.

[c9] A method as recited in claim 1 further comprising prior to filtering, regularizing an image ratio of the second image with respect to the first image to form a regularized image ratio.

[c10] A method of operating a digital image device comprising:
generating a first digital image;
generating a second digital image;

matching the second image to the first image by,
generating an image ratio of the first image and the second image;
regularizing an image ratio of the second image with respect to the first image to
form a regularized image ratio;
filtering the regularized image ratio to form a filtered ratio; and
multiplying the second image by the filtered ratio to form an adjusted image.

[c11] A method as recited in claim 10 wherein filtering comprises low pass filtering.

[c12] A method as recited in claim 11 wherein low pass filtering comprises boxcar filtering.

[c13] A method as recited in claim 10 wherein forming an image ratio comprises forming an image ratio having a numerator and a denominator and wherein regularizing comprises adding a constant to the denominator.

[c14] A method as recited in claim 10 wherein forming an image ratio comprises forming an image ratio having a numerator and a denominator and wherein regularizing comprises multiplying the numerator by the second image and the denominator by the second image and adding a constant to the denominator.

[c15] A method as recited in claim 10 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is contrast matched to the first image.

[c16] A method as recited in claim 10 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is brightness matched to the first image.

[c17] A method as recited in claim 10 wherein multiplying comprises multiplying the second image by the filtered ratio to form the adjusted image where the adjusted image is contrast and brightness matched to the first image.

[c18] An imaging system comprising:
an image forming device for generating a first image and a second image; and
a controller coupled to said image forming device for receiving said first image and said second image; said controller generating an image ratio of the first image and the second image, regularizing an image ratio of the second image with respect to the first image to form a regularized image ratio, filtering the regularized image ratio to

form a filtered ratio, and multiplying the second image by the filtered ratio to form an adjusted image.

- [c19] An imaging system as recited in claim 18 further comprising a display coupled to said controller for displaying said adjusted image.
- [c20] An imaging system as recited in claim 18 further comprising a storage medium for storing the first image the second image and the adjusted image.